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ABSTRACT

A study investigated the way in which self-disclosure and uncertainty levels operated over time in 44 developing relationships. The 88 subjects in the study were assigned to dyadic relationships, with the dyads working together on various tasks throughout the semester of an introductory speech class. Uncertainty level and five dimensions of disclosure level (amount, intent, honesty, depth, and positiveness of disclosures) were measured three times during the semester. Results indicated that a combination of the five dimensions of self-disclosure failed to predict uncertainty levels at any time. As hypothesized, uncertainty level decreased over time and amount of disclosure increased over time. However, perceptions of intent of disclosure, honesty of disclosure, and depth of disclosure--all of which were hypothesized to increase over time--fluctuated, while positiveness of disclosure did not significantly change over time. Failure to support the hypotheses may have been the result of the poor reliability and inadequate validity of the self-disclosure instrument and the laboratory-type setting. (RL)

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The Relationship Between Uncertainty Level and Self-Disclosure Over Time

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Communication researchers have been fascinated in investigating and theorizing about development and growth of interpersonal relationships (Knapp, 1978; Berger and Calabrese, 1975). Research examining the process of an ongoing, continuing relationship has been far from promising in our short history as a discipline. However, there has been a plethora of correlational studies examining the relationship(s) between some independent variable(s) to some dependent variable(s). This should not be taken negatively. These studies do add to our knowledge of how individuals maintain their interpersonal relationships. Nonetheless, one should note some specific weaknesses with previous interpersonal communication research. First, data is usually collected during one time period, assuming stable perceptions. One needs to measure the perceptions of individuals repeatedly. This way comparisons can be made from time 1 to time 2, etc. for possible perceptual changes. A second problem with previous interpersonal research is that the dyads studied are not all beginning at a zero history point. Dyads developing a new relationship are assumed the same in their perceptions as dyads who have known one another for years. One needs to isolate dyads who are strangers and follow them over time, thus, controlling for any history problems. This in and of itself is a difficult task. But if researchers want to capture the nature of

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a developing, ongoing relationship, one must attempt to isolate those dyads. The purpose of this investigation is to overcome these two problems while examining the relationship between uncertainty level and self-disclosure. These variables seem operative in predicting relationship development, thus warranting empirical investigation.

In this investigation, there are three conceptualizations of interpersonal relationships which underline relation growth. First, interpersonal relationships maintian and develop as a process of reciprocated interactions (Newcomb, 1961; Altman and Taylor, 1973; Knapp, 1978). Additionally, Berger and Calabrese (1975) theorize that the development of ongoing relationships are a result of communication exchange. Secondly, relationships strive toward intimate relations (Altman and Taylor, 1973; Berger and Calabrese, 1975; Scott and Powers, 1978). Altman and Taylor (1973) argue that the intimacy level of communication content tends to increase over time. A third and final assumption of interpersonal relationships is that self-disclosure is a necessary behavior of an intimate relationship (Wheeless, 1978; Pearce and Sharp, 1973). Intimacy in a dyadic relationship involves self-disclosure communication. Thus, these three assumptions maintain a process of relational development from stages of non-intimacy to stages of intimacy.

UNCERTAINTY LEVEL

Berger and Calabrese (1975) developed a theoretical system to explain initial interaction phenomenon. The central construct to this model is that of uncertainty. Uncertainty is employed by Berger and Calabrese (1975) to mean the degree of confidence an individual feels

about his/her own ability to explain retroactively or predict proactively a co-interactant's behavior (Lester, 1978). In addition, uncertainty is high during initial encounters because prediction of future behavior is difficult and no knowledge factors have been exchanged between the dyad members.

In discussing the nature of uncertainty. Berger and Calabrese (1975) suggest that as a relationship develops over time, the level of uncertainty should be reduced, thus indicating the developmental growth of a particular interpersonal relationship. One purpose of this investigation was to examine this developmental notion. Therefore, the following hypothesis was posited:

H1: Uncertainty level will significantly decrease over time, Such that,

H1A: Phase 1 will be greater than Phase 2.

H1B: Phase 2 will be greater than Phase 3.

In addition to the developmental notion of uncertainty, this investigation examined the relationship between uncertainty level and self-disclosure. Since uncertainty is an excellent explanation for continuing, developing relationships and one potential outcome of an ongoing relationship is intimate talk, then one can argue that low levels of uncertainty would predict higher levels of intimacy. Thus intimate relationships are characterized by self-disclosive communication which is a behavioral outcome of relationship development and escalation.

Berger and Calabrese (1975) provide the arguments for the reduction of an individual's uncertainty through intimate interactions offered

by the other dyad member -- the greater the intimacy of the communication, the more data a person has to process to make confident predictions of his/her partner's behavior. Further, Berger and Calabrese (1975) state in axiomatic form (#4) that: High levels of uncertainty in a relationship cause decreases in the intimacy level of communication content; low levels of uncertainty produce high levels of intimacy. Further, as the level of intimacy of communication content increases, uncertainty will decrease. In addition, since self-disclosure is a behavioral indicant of an intimate relationship (Wheeless, 1977; Pearce and Sharp, 1973), one can infer another possible axiomatic relationship. High levels of uncertainty in a relationship cause decreases in self-disclosure, while low levels of uncertainty produce high levels of disclosure. Thus, the following hypothesis was examined:

> H2: A linear combination of the five dimensions of self-disclosure will significantly and inversely predict uncertainty level in each of the three phases.

SELF-DISCLOSURE

Self-disclosure is a form of intimate communication which is exchanged among individuals. The term "self-disclosure" has been used by Jourard (1964) and coined as "verbal accessibility" by Polansky (1965). Jourard and Lasokow (1958) defined self-disclosure as, "the process of making the self known to others" (p. 91). For the purpose of this study, the conceptualization of self-disclosure employed previously by Wheeless and Grotz (1976) was used:

> A self-disclosure is any message about the self that a person communicates to another. Consequently, any message or message

unit may potentially vary in the degree of self-disclosure present depending upon the perception of the message by those involved (p. 338).

The study of self-disclosure can be characterized as a search for meaningful, predictive relationships among self-disclosive behaviors and other potentially related variables. Wheeless (1978) reports many studies of self-disclosure which have found low, moderate relationships among self-disclosure and other correlates examined (Cozby, 1973; Pearce and Sharp, 1973). Reciprocity of disclosure (Cozby, 1972, 1973; Altman, 1973), and greater mutual liking in disclosive relationships (Cozby, 1972) appear to be among the few consistent results dealing with self-disclosure, cited by Wheeless (1976; 1978) and Wheeless and Grotz (1976; 1977) have demonstrated that self-disclosure is linked to trust and solidarity. Of particular interest to this report is the notion that self-disclosure increases or develops over acquaintance time (Altman and Taylor, 1973; Newcomb, 1973). However, the multidimensional nature of self-disclosure has not been examined developmentally. Therefore, this investigation posits the following hypotheses:

H3: Amount of self-disclosure will significantly increase over time,

Such that,

H3A: Phase 1 will be less than Phase 2.

H3B: Phase 2 will be less than Phase 3.

Also:

H4: Consciously intended self-disclosure will significantly increase over time

Such that,

H4A: Phase 1 will be less than Phase 2.

H4B: Phase 2 will be less that Phase 3.

Also:

H5: Positiveness of self-disclosure will significantly increase over time,

Such that,

H5A: Phase 1 will be less than Phase 2.

H5B: Phase 2 will be less than Phase 3.

Also:

H6: Honesty of self-disclosure will significantly increase over time,

Such that,

H6A: Phase 1 will be less than Phase 2.

H6B: Phase 2 will be less than Phase 3.

Also:

H7: Depth of self-disclosure will significantly increase over time,

Such that,

H7A: Phase 1 will be less than Phase 2.

H7B: Phase w will be less than Phase 3.

METHOD

Subject Sample

The initial sample for this study included 200 college students from a large Mid-Western university who were enrolled in introductory speech communication classes during the spring semester of 1979. Data was collected three times over the semester using the same dyad pairs.

However, due to student absences, the final sample size contained 88 subjects (44 dyad pairs).

Criteria for Scale Validities

All scales were validated with three different but concurrent statistical considerations: item-total correlations, internal reliability estimates and factor analysis.

For all factor analysis an eigenvalue of 1.0 was established as a guideline for the extraction of an additional factor and the Scree procedure was employed in order to determine the number of "valid" factors within the eigenvalue of 1.0 guideline. In all orthogonal factor analyses performed in this investigation, a factor was considered meaningful if two or more items loaded on that factor above .60 and less than .40 on other factors. After the extraction of two or more items utilizing the 60/40 criterion, if an item failed to load on any factor but had its highest loading account for twice the variance of the second highest loading, then the item was also considered to be part of that factor. In all oblique factor analyses performed in this investigation, a factor was considered meaningful if two or more items loaded on that factor above .40 and the factor loading accounted for twice the variance of any secondary loadings. Increased internal reliability was the ultimate consideration for determining factor structure in that any items which decreased reliabilities would be deleted from the scale. Reliabilities for each instrument were computed utilizing the Spearman-Brown (odd-even) and Nunnally formulas (Wood, 1960; Nunnally, 1967, 134-194).[2] Dimensional structures consistent with conceptualization were sought but all other

statistically meaningful structures were examined. Items failing to meet statistical criteria and not constituting another viable factor would be deleted.

Operationalization of Variables Under Study

Uncertainty Level

A 10-item, seven-interval, Likert-type instrument was used to measure uncertainty level (Prisbell and Anderson, 1979). Subjects were asked to indicate how certain/knowledgeable they were about the other dyad member, in areas of behaviors, emotional states, feelings, and interests. Previous reliability for the scale was .92 (Prisbell and Anderson, 1979).

Factor analysis of the uncertainty level instrument produced an unrotated unidimensional solution for all three measurement times. Split-half reliabilities for the instrument ranged between .87 and .92 (see Table 1 for scale summary statistics).

Self-Disclosure

Scales measuring reported self-disclosure consisted of 31, seven-interval, Likert-type statements (Wheeless, 1978).[3] The instrument was reported to have five factors. Factor reliabilities reported in a previous investigation (Wheeless, 1978) were: amount, .88; consciously intended disclosure, .85; positiveness-negativeness of revealed information, .91; honesty, .87; and depth of disclosure, .84. In this study, the self-disclosure scales were scored so that higher self-disclosure scores indicated greater amounts of disclosure, more consciously intended disclosure, greater positiveness of disclosure, more honesty of disclosure, and greater depth of disclosure.

The Wheeless (1978) 31-item scale was submitted to a confirmatory oblique factor analysis. Confirmatory oblique factor analysis produced a reliable five-dimensional solution.[4] Reliabilities using Nunnally's (1967) internal reliability formula on each dimension of self-disclosure for all three measurement times were: amount = .72, .85, .86; depth = .77, .73, .79; positiveness = .93, .94, .93; honesty = .84, .78, .84; and intent = .75, .75, .88 (see Table 1 for scale summary statistics).

Procedures

Data was collected three individual times throughout the semester; (1) during the second class period; (2) at the end of the third week of the semester; and (3) at the end of the sixth week of the semester.

During the second class meeting, dyads were formed by the instructor of the class. All subjects were asked to work with another person unknown to them as part of class exercises. Following this procedure, subjects then participated in a feedback exercise for approximately 30-35 minutes. After completion of the task, the subjects were asked to complete the uncertainty level and disclosure measures on their partner. This completed Phase One of the experiment.

During the seond and third week of school, all dyad pairs were asked to work on four exercises together in class. All exercises involved interaction between the dyad members, thus allowing one another to become somewhat acquainted. These exercises included: the Perception Puzzle game, the Kidney Machine exercise, the What Constitutes Intimate Communication exercise, and the Zero-Sum game. At the end of the third week of class and after the final exercise (Zero - Sum game), the dyads

completed the uncertainty level and disclosure instruments on one another. This completed Phase Two of the experiment.

The final phase of this investigation was conducted at the end of the sixth week of class. During the fourth week of class, all subjects were assigned to work with their dyad members on an outside class project. The project involved the dyad performing a Mini-Study on nonverbal communication. At the end of the sixth week, all projects were collected by the class instructors and all subjects completed the uncertainty level and disclosure instruments. The procedure for data collection were somewhat similar to those used by Richmond (1978), except this investigation included a third phase.

Statistical Analysis

Hypothesis 1 and 3 through 7 were tested by utilizing a repeated measures multiple regression (Cohen and Cohen, 1975). The three phases for each variable served as the conditions for each of the 88 subjects yielding an overall N of 264 for each regression.

The between section of the variance was removed so that the analysis utilized the within portion to test if any significant differences occurred. Significance of a main hypothesis allowed the dummy coded phases to be tested to indicate whether sub-hypotheses were supported.

Post hoc power tests were computed for each regression to determine the power for the test of the variance due to the phases as a function of the sample size. Hypothesis 2 was tested by a multiple regression model utilizing uncertainty level as the dependent variable and the five dimensions of self-disclosure as the independent variables (Cohen and

Cohen, 1975). A separate regression was done for each of the phases. Post hoc power analyses were computed for each regression to determine the actual power obtained in the analyses.

RESULTS

Preliminary Analysis

Because the variables utilized in the study are expected to be intercorrelated, Pearson-product moment correlations were computed for each pair of variables at each phase. Of the 171 correlations computed, 58 were significant. Of those, only 5 of the correlations between uncertainty level and self-disclosure variables were significant of the 51 possibilities. (An overall correlation matrix can be found in Table 2).

Hypothesis 1

Uncertainty level changed sifnificantly over time. Between analysis accounted for 59% of the overall variance, leaving 41% of the variance as the within factor. The time condition (phases) accounted for 17% of the overall variance, and more importantly, 40% of the within variance thus yeilding a significant R^2 of .40 ($F = 59.003$, $df = 2, 174$, $p < .01$). Subsequent t tests showed that both the comparisons between uncertainty level between Phase 1 and Phase 2 and between Phase 2 and Phase 3 were significant (Phase 1-2: $t = 10.125$, $df = 174$, $p < .01$; Phase 2-3: $t = 6.044$, $df = 174$, $p < .01$).

The first subhypothesis was supported and uncertainty level was greater at Phase 1 ($\bar{x} = 42.31$) than at Phase 2 ($\bar{x} = 36.44$). The second subhypothesis was also supported and uncertainty level was greater at Phase 2 than at

Phase 3 (x = 39.94).

The post hoc power analysis for the test of variance due to time change indicated that power was greater than .99. (Summary statistics can be located in Table 4).

Hypothesis 2

The multiple regression analysis for each of the phases of the study indicated that a linear combination of the self-disclosure dimensions did not significantly predict uncertainty level (Phase 1: $F = .40$, $df = 5, 82$, $p = .8452$; Phase 2: $F = 1.56$, $df = 5, 82$, $p = .1791$; Phase 3: $F = 1.01$, $df = 5, 82$, $p = .4151$). (Summary statistics can be located in Table 3).

Post hoc power analysis were conducted for the regression at each phase. None of the analyses maintained sufficient power to have found a relationship if one had existed.

Hypothesis 3

The multiple regression repeated measures analysis showed support for the third hypothesis. Amount of self-disclosure changed significantly over time. Between variance accounted for 48.85% of the overall variance, leaving 51.15% as the within portion. The time condition accounted for 66.13% of the within variance, yeilding a significant R^2 of .6613 ($F = 169.9212$, $df = 2, 174$, $p < .01$). The t tests to analyze the comparisons between amount of self-disclosure from Phase 1 to Phase 2 and from Phase 2 to Phase 3 were both significant (Phase 1-2: $t = 14.3274$, $df = 174$, $p < .01$; Phase 2-3: $t = 2.8893$, $df = 174$, $p < .01$).

The first subhypothesis was supported indicating an increase in

amount of self-disclosure over time (Phase 1, $\bar{x}$ = 14.61, Phase 2, $\bar{x}$ = 22.67). Likewise, the second subhypothesis was supported indicating a further increase in the amount of self-disclosure at Phase 3 ($\bar{x}$ = 24.31).

Post hoc power revealed that the analysis maintained power greater than .99.

Hypothesis 4

Consciously intented self-disclosure was found to change significantly over time. The between section accounted for 21% of the overall variance. Hence, the within section accounted for 79% of the overall variance. 83% of the within variance was accounted for by the time condition and this was found to be significant ($F = 411.2704$, $df = 2, 174$, $p < .01$). The t tests associated with the comparison between the phases were both significant (Phase 1-2: $t = 32.0886$, $df = 174$, $p < .01$; Phase 2-3: $t = 13.3869$, $df = 174$, $p < .01$).

The first subhypothesis indicated that consciously intended self-disclosure increased form Phase 1 ($\bar{x}$ = 9.77) to Phase 2 ($\bar{x}$ = 20.75). Subhypothesis two, although significant, indicated that consciously intended self disclosure decreased from Phase 2 to Phase 3 ($\bar{x}$ = 16.17).

Post hoc power analysis revealed that power was greater than .99.

Hypothesis 5

Positiveness of self-disclosure was not found to differ significantly over time. Between analysis accounted for 77% of the overall variance leaving only 23% as within variance. The resulting 3% of the overall variance accounted for by the time condition was not significant ($F = 2.6754$, $df = 2,174$, $p > .10$). Therefore, no further analysis were done.

Post hoc power revealed that not enough power was maintained in the analysis to have found a change of one had been present (power $< .10$).

Hypothesis 6

Examination of the repeated measures multiple regression analysis indicated support for the sixth hypothesis that honesty of self-disclosure does change significantly over time. Within variance accounted for 76% of the overall variance as determined by the between variance which accounted for 24% of the overall variance. The time condition accounted for 85% of the within variance and was significant ($F = 502.2202$, $df = 2, 174$, $p < .01$). Subsequent t tests conducted to determine the significance of the subhypotheses supported a change in both comparisons (Phase 1-2: $t = 26.8209$, $df = 174$, $p < .01$; Phase 2-3: $t = 28.0464$, $df = 174$, $p < .01$).

The first subhypothesis indicated that honesty of self-disclosure decreased rather than increased as hypothesized from Phase 1 ($\bar{x} = 36.61$) to Phase 2 ($\bar{x} = 18.45$). The second hypothesis was supported as stated and indicated an increase from Phase 2 to Phase 3 ($\bar{x} = 37.44$).

Post hoc power analysis revealed that power was greater than .99.

Hypothesis 7

Depth of self-disclosure changed significantly across time, and the seventh hypothesis was supported. The between section of the analysis accounted for 25% of the overall variance leaving 75% as the within portion. The time condition accounted for 83% of the within proportion yeilding a significant R^2 of .8337 ($F = 436.1136$, $df = 2, 174$, $p < .01$).

The corresponding t tests indicated that significant changes occurred in each of the comparisons (Phase 1-2: $t = 18.3026$, $df = 174$, $p < .01$; Phase 2-3: $t = 10.9228$, $df = 174$, $p < .01$).

The first subhypothesis indicated that depth of self-disclosure decreased from Phase 1 ($\bar{x} = 22.36$) to Phase 2 ($\bar{x} = 14.25$) contrary to the hypothesis. The second subhypothesis, although significant, also indicated a decrease from Phase 2 to Phase 3 ($\bar{x} = 9.41$).

Post hoc power indicated taht the analysis maintained sufficient power (power $>$ .99). (Summary statistics for all hypotheses tests, 3-7, can be located in Table 4).

DISCUSSION

The present study provides insight into changes in individual's levels of self-disclosure and uncertainty level over a period of time. In general, as suggested in the hypotheses, uncertainty level decreased over time while amount of disclosure was the only self-disclosure to increase repeatedly over time. Perceptions of intent of disclosure, honesty of disclosure, and depth of disclosure fluctuated over time while positiveness of disclosure did not significantly change over time.

The first hypothesis was supported indicating that uncertainty level did decline during the building of dyadic relationships. This finding supports the assumption that as relationships maintain and escalate over time, uncertainty becomes reduced this allowing dyad members to gain further knowledge about how their partners would behave.

Future research should focus on the changes of uncertainty levels in

a variety of situations. Additionally, various relationship types should be examined including intimate, casual and business/professional relationships. Research might be conducted on relationships which have been established for various lengths of time to determine if self-disclosure and uncertainty level are effected differently during the entry phase of relationships and more established relationships. The effects of membership in groups larger than dyads may prove to be of value to communication scholars.

Hypothesis two was not supported. A linear combination of self-disclosure variables was not significantly related to uncertainty level in all three phases analyzed. One potential explanation for the non-significant findings is the low reliability estimates of the self-disclosure instruments. Although the reliability is acceptable, it is not perfect. Therefore, the potential amount of vaiance accounted for between the predictor variables of disclosure to the criterion variable of uncertainty is bounded by the unreliability present in all variables.

Another plausible explanation is that the linear composite vector created for self-disclosure is not adequate due to low correlations among the self-disclosure variables. In other words, the vector created is not a good representation of the self-disclosure construct. Therefore, correlations with this vector are not likely to be excellent predictors of self-disclosure. Thus, the relationship between disclosure and uncertainty was bounded by both the unreliability of all instruments as well as the inadequate self-disclosure vector.

Hypothesis three through seven examining each dimension of self-disclosure over time varied in their outcomes. Specifically, amount

of disclosure (hypothesis 3) increased over time within a relationship from time 1 and time 2, and time 2 and time 3. Amount of disclosure should be expected to increase during each phase of the relationship as the dyad members become familiar with one another, indicating the escalation of that dyadic relation.

Although hypothesis four was supported, indicating that intent of disclosure varies significantly over time, the second sub-hypothesis indicated that intent of disclosure decreased from time 2 to time 3. Nonetheless, intent of disclosure did increase from time 1 to time 2.

Hypothesis five was not supported indicating that positiveness of self-disclosure did not change within the course of relationship development. One potential explanation for this finding is that positiveness of disclosure was established on the onset of the relationship. In other words, when individuals formulated their dyads, a baseline rule or state norm was established to be positive in one's self revealing discourse which maintained throughout the duration of the in-class relationship. If one regards the means of the positiveness dimension of self-disclosure, one notices that they are moderately high throughout the phases.

In addition, when individuals first come into contact with one another, they generally self-disclose in a positive fashion. These researchers believe that if the dyad members had an opportunity to further develop their relationship, that the positiveness of their disclosures would have significantly changed to describing negative feelings.

Hypothesis six was supported. However, honesty of disclosure decreased form time 1 to time 2 and then increased from time 2 to

time 3. Finally, hypothesis seven was supported. However, depth of self-disclosure decreased over time from phase to phase.

The inconsistencies in the self-disclosure findings might be explained in several ways. First, the self-disclosure instrument utilized in this study has been found to be not as reliable as would be hoped for. Thus, it is difficult to have confidence that the scales are accurately measuring the actual level of self-disclosure that is perceived as having taken place by the participants. Because means of self-disclosure in the various phases are not necessarily accurate, the patterns of self-disclosure over time are also not necessarily correct. Future research should utilize self-disclosure scales which demonstrate high levels of reliability consistently.

Secondly, the situation in which the study was conducted may not have been conducive to normal operations of self-disclosure in the relationships developed. Subjects were assigned to relationships within the context of a classroom situation. Self-disclosure was hypothesized to operate in the way it would be expected to in a naturally occurring, developing relationship. Because subjects in this study were class oriented, rather than relationship oriented, they may not have self-disclosed as they would in other relationships. For instance, at phase one, a particular level of depth of self-disclosure was obtained. However, rather than increasing over time as it should in naturally occurring relationships, it may have decreased in a classroom situation because subjects realized that relationships, in most cases, would come to an end at the end of the class, and they did not want to

get too involved. If this type of mentality was maintained by some of the subjects, it would be difficult to determine in the data, what points correpond with relationship development, maintance, or disengagement. These, in fact, may very well be different for the various subjects, as some felt that this relationship may develop into a long term one, and some realized early that it was doomed to come to an ultimate end. These mind sets are likely to have confounded the data, thus inhibiting the chances of drawing clear cut conclusions. Future research should be conducted in naturally occurring or field settings in order to maintain greater confidence that subjects consider relationships to be in the developmental stage.

Finally, the self disclosure instrument utilized has not been shown to have adaquate construct validity for this type of research. It may be that the instrument measures something other than self-disclosure. Additionally, it may be that the instrument is sensitive to situations, in that self-disclosure levels might be confounded by subject's reactions to variables other than self-disclosure in the relationship, such as task type in the present study. Future research should attempt to demonstrate construct validity for the self-disclosure instrument by means of a multitrait-multimethod design (Campbell and Fiske, 1959).

NOTES

1. The authors would like to thank Joel Doelger, Phyllis Vance, and Cindy Rasmussen for their help in the data collection procedures.

2. Coefficients of internal reliability were computed using the Spearman-Brown prophecy formula for split-half reliability (Wood, 1960), and Nunnally (1967) formula 6 - 18. Nunnally's formula

$$r_{kk} = \frac{kr_{ij}}{1 + (k - 1)\, r_{ij}}$$

is computed by taking the average correlation among all items in a measure multiplied by the number of items in the measure, divided by 1 plus the number of items minus one, times the average correlation. Pearson product-moment correlations are transformed to Z scores before summing in the averaging step, and the average Z score is then transformed back to the equivalent average Pearson product-moment correlation before use in Nunnally's formula (Nunnally, 1967, p. 134-194).

3. Copies of the instruments used in this study are available upon request from the authors.

4. Factor loadings and item-total correlations can be obtained upon request from the authors.

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TABLE 1

Scale Summary Statistics

Variable	N	Mean	Standard Deviation	Internal Reliability
First Phase				
Uncertainty Level	88	42.31	9.24	.91
Amount of Self-Disclosure	87	14.61	3.22	.72
Depth of Self-Dsiclosure	88	22.36	5.48	.77
Positiveness of Self-Dsiclosure	88	32.28	8.27	.93
Honesty of Self-Disclosure	88	36.61	8.06	.84
Intent of Self-Disclosure	88	9.77	2.41	.75
Second Phase				
Uncertainty Level	88	36.44	8.96	.92
Amount of Self-Disclosure	88	22.67	6.97	.85
Depth of Self-Disclosure	88	14.25	3.08	.73
Positiveness of Self-Disclosure	88	33.27	8.15	.94
Honesty of Self-Disclosure	88	18.45	3.92	.78
Intent of Self-Disclosure	88	20.75	3.89	.75

TABLE 1

(Continued)

Variable	N	Mean	Standard Deviation	Internal Reliability
Third Phase				
Uncertainty Level	88	32.94	7.78	.87
Amount of Self-Disclosure	88	24.31	6.98	.86
Depth of Self-Disclosure	88	9.41	3.48	.79
Positiveness of Self-Disclosure	88	33.93	8.17	.93
Honesty of Self-Disclosure	88	37.44	6.71	.84
Intent of Self-Disclosure	88	16.17	3.33	.88

TABLE 2

Correlation Matrix

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
(1)	UL1	-	.52	.48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(2)	UL2		-	.67	-	-.32	-	-	-	-	-	-	-	-	-	-.22	-	-	-
(3)	UL3			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(4)	AMT1				-	.43	-	-	-	.68	.32	-	-	-	.54	.47	-	-	-
(5)	DPTH1					-	-	-	-	.47	.49	-	.21	-	.34	.51	-	-	-
(6)	POS1						-	.36	.33	-	-	.72	.23	.38	-	-	.53	.36	.34
(7)	HON1							-	.31	-	-	.32	.50	.48	-	-	-	.59	.40
(8)	INT1								-	-	.34	-	.22	.23	-	.25	-	.37	.34
(9)	AMT2									-	.34	-	-	-	.74	.40	-	-	-
(10)	DPTH2										-	-	.24	.24	.26	.67	-	-	-
(11)	POS2											-	.29	.40	-	-	.72	.51	.36
(12)	HON2												-	.33	-	-	-	.61	.31
(13)	INT2													-	-	.28	.25	.52	.57
(14)	AMT3														-	.33	-	-	-
(15)	DPTH3															-	-	-	-
(16)	POS3																-	.45	.39
(17)	HON3																	-	.47
(18)	INT3																		-

TABLE 3

Summary of Statistics for Test of Hypothesis 2

Phase	R^2	Overall F Test	df	p level
Phase 1	.024	.40	5, 82	.8452
Phase 2	.087	1.56	5, 82	.1791
Phase 3	.058	1.01	5, 82	.4151

TABLE 4

Summary Statistics for Hypotheses Tests 1, 3 - 7

	Uncertainty Level	Amount Self-Disclosure	Intent Self-Disclosure	Positiveness Self-Disclosure	Honesty Self-Disclosure	Depth Self-Disclosure
Between Variance	.5875	.4885	.2003	.7704	.2374	.2484
Within Variance	.4128	.5115	.7967	.2296	.7626	.7516
% of Within Variance Accounted For by Time Condition	.4039	.6613	.8251	.0298	.8523	.8337
F test	59.003**	169.9212**	411.2704**	2.6754	502.2202**	436.1136**
df	2, 174	2, 174	2, 174	2, 174	2, 174	2, 174
t test Phases 1-2	10.125**	14.3274**	32.0886**		26.8209**	18.3206**
df	174	174	174		174	174
t test Phases 2-3	6.044**	2.8893**	13.3869**		28.0464**	10.9228**
df	174	174	174		174	174
Power	> .99	> .99	> .99	> .10	> .99	> .99

** $p < .01$